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THE MACDONALD LASSIE

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In This Issue

Cover: The official opening of the
Macdonald Raptor Research Centre
took place recently. Among those
at the opening were Vice Principal
A. C. Blackwood, Minister of the
Environment Victor Goldbloom,
author-conservationist Gerald
Durrell, and raptor curator David
Hughes with a golden eagle.
Photo by Ralph Emery, A.R.P.S.

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Journal Jottings

Some issues do not pan out
exactly as they were planned, and
this is one of them. Many months
ago we had planned that Prof.
Peter Hamilton, of the Animal
Science Department, would write
the lead article for this issue.
Regrettably for us the deadline for
his article coincided with his
acceptance of the position of
Registrar at Nova Scotia Agricul-
tural College in Truro, Nova Scotia.
We know that we will miss his
advice, his interest in the Journal,
and his contributions to it. We also
know that we cannot but wish
him well in his new position.
Fortunately we were able to very

adequately fill the gap left in the
Journal by an excellent two-part
article on Land for Waste
Management. I firmly believe that
any alternative measure that can be
contemplated and possibly put
into practice in a large scale that
can alleviate the damage done to
our already polluted waters must be
seriously considered. Water has
to be one of our most important
natural resources, if not the most
important. It's long past the time
when we should stop using our
rivers and lakes as a dumping
ground for human and other wastes.
I'm sure you'll read one alternative
to this — Land for Waste Man-
agement — with keen interest.
Now I'll have to find a replacement

for this piece in an upcoming issue.

It is with sorrow that we carry
on the pages of This Month with
the QWI the Obituary of Past
President Mrs. V. R. Beattie, who
died suddenly on Friday, October 5.
Although I met her only a few
times, I feel I knew her for what
she was, a truly remarkable woman.
A woman of warmth, strong
character, and a great sense of
responsibility, Mrs. Beattie will be
sorely missed not only by those
who knew her well but also by
those whose path she crossed
but occasionally.

Hazel M. Clarke.

Editorial

The campaigning for the recent provincial election focused the public's attention towards the domestic problems and opportunities facing the province of Quebec. While there is considerable merit in periodically reassessing these social and economic domestic issues, there is the danger that during these political campaigns we perhaps might become a little too inward-looking in our search for solutions to the problems facing us.

A recent example of this happening has just occurred with the outbreak of fighting in the Arab-Israeli conflict. Aside from the tragedy associated with such a war, it holds the potential of drastically altering the world's supply of oil reserves. Already certain nations are considering increasing the price of crude petroleum or even cutting off supplies to the western world. For Quebec, which relies almost entirely upon imports for its domestic oil needs, the result of such an action could be very serious indeed.

Aside from the ethics or moralities of mixing politics and oil, it does illustrate the complex linkages and interrelationships that Quebec and Canada have with the other countries of the world. We have truly become part of a world community. Gone are the days of isolationism when a country could

make decisions and run its affairs in isolation to or indifference to other countries of the world. Now we have been forced to be aware of the effects of our decisions on other countries because of the effects their decisions will be having on us. The recent manipulations in the world's monetary market as nations devalue and "float" their currency serve as example of how interdependent the effects of each country's decisions have become.

The field of agricultural and food production, processing, and marketing is no exception to this interdependence with other countries. As farm producers we have also become a part of the world community of farmers. No longer are the prices of farm products, or machinery, or fertilizer, or fuel and oil determined only by market supply and demand conditions inside Quebec or Canada. The disruptions of oil supplies from the Middle East, the recent or impending grain trade agreements with Russia and China, the abilities of underdeveloped nations of the world such as India and Nigeria to feed themselves, and the formation of trading alliances among nations such as those belonging to the European

Economic Community will all have just as large and, most likely, dramatic impacts on the prices Canadian farmers will receive for their products as will any policy coming out of Quebec City.

As agricultural producers we need to view our domestic farm and any new proposed economic policy in this world context. The new provincial farm organization has the potential for improving the farmers' situation. But it can do so only insofar as world trade relationships provide a favourable economic climate in which it can operate. It can bargain for increased farm prices but this does no good if the world petroleum situation forces up the prices of fuel to a level that wipes out the increase in farm prices. If we view Quebec's and Canada's food and agricultural situation in this way, it will become apparent to us how close to home those "far away" newspaper headlines in recent weeks have actually become.

Gordon Bachman

Land for Waste Management

The International Conference on Land for Waste Management, held in Ottawa on October 1 — 3, brought together people from many different disciplines to discuss what is rapidly becoming both an environmental and resource-use problem.

A waste, as someone defined at the Conference, is something which costs more to keep and use than it does to throw it away. There is a general feeling that we must be ignoring some factors in our economic calculations when something which we know is a resource becomes, by this definition, a waste.

Traditionally wastes were disposed of fairly close to their source of production. Farmers for centuries, and without technical help, have returned animal wastes to the soil. Sewage from cities was usually allowed to drain into running water and the solid parts were put into dumps. Factories dumped their wastes close to the factory site. What has changed is that animals as well as people are becoming more urbanized and are congregating in a smaller proportion of the total land area. It is not as easy to return wastes to the land in low amounts so that nature can decompose the wastes.

This is what the Conference was about. Any plan for the proper use of these waste materials involves inputs from various people: from agronomists, from soil scientists, from engineers, from health inspectors, from sociologists, from planners, etc. The Conference got all of these people together for a discussion of a common problem. We had to learn each other's languages so we could communicate.

We had to discuss the problem of whether we would apply wastes to the soil only in those amounts that gave us maximum crop yields, or whether we would manage soils for their maximum capacity to decompose wastes. At these high rates crops do not grow well, and under some conditions the soils may be harmed.

The papers presented at the Conference discussed a) some of the techniques of waste management; b) Some of the changes in soils occurring when wastes are applied to soils; c) the effect of climate, for example, the extra problems created in Arctic areas and also in extremely wet areas, and d) some of the planning problems in waste management.

The techniques include such things as septic tanks for individual homes, as well as large land spray irrigation systems, one of which is operating in the Okanagan Valley in British Columbia and several of which are operating in the United States. Doctor M. Ewart, whose sewage farm in Germany is described in the accompanying article by Prof. Broughton, was at the Conference to describe their experience dating back to 1956.

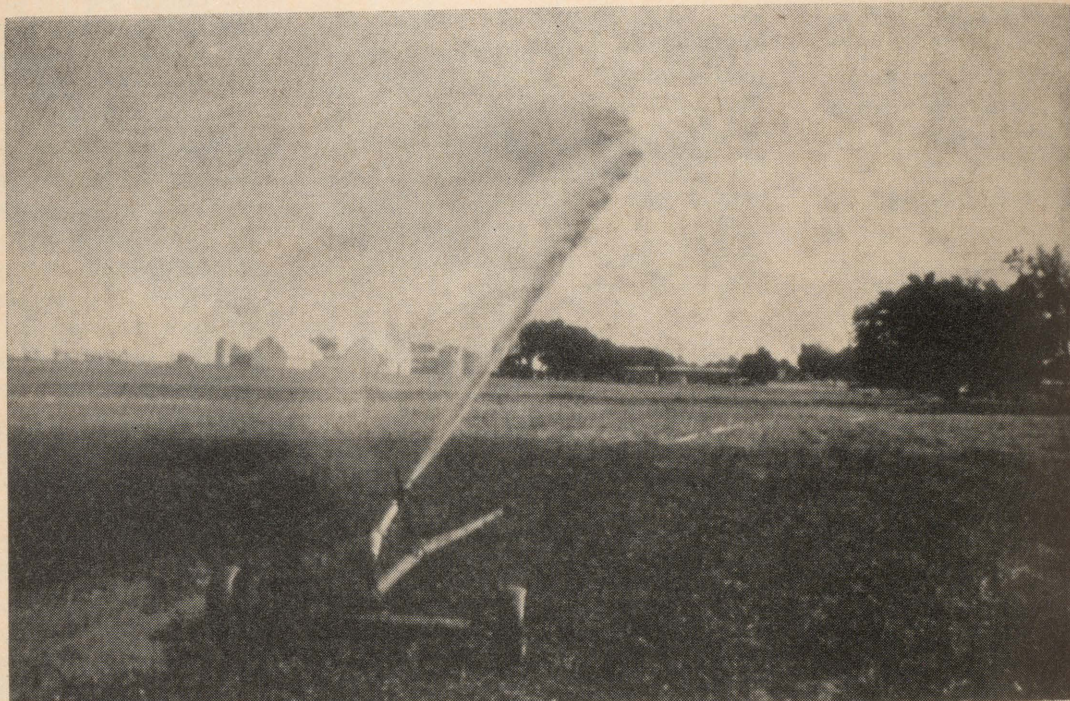
Some of the changes which occur in soils are the temporary reduction in the oxygen content and a permanent accumulation of some of the heavy metals. These wastes, such as cadmium and mercury, are toxic, and can reach our food through crops grown on these soils. There is concern that some salts could move from the wastes through the soil into ground water, polluting this water near wells used for drinking purposes.

The health aspects must be brought up in any discussion of waste management. Disease-carrying organisms do occur in wastes. People can pick up diseases either during the handling of the wastes, or from ground water if the wastes are not filtered through enough soil before they reach the water. The general experience with projects such as Dr. Ewart's on irrigating soils with raw sewage is that there have been no health problems. However, the attitude of the Departments of Health in Canada and the U.S. is generally that application of raw sewage will not be allowed in soils that are used for producing food crops.

What was the result of the Conference? No bright, new, perfect solutions at zero cost came out of the Conference? There was agreement on common problems, and the beginning of cooperative work. Farmers can feel that other people are now doing what the farmer has been doing for a long time — using wastes as a resource by recycling them through soil to fertilize crops.

Prof. B. P. Warkentin,
Soil and Land Resources,
Dept. of Renewable Resources.

As the cries continue to go up about the pollution of our lakes and rivers due to the dumping of raw city sewage into them, additional approaches to sewage treatment are investigated. In Canada and the United States people have been cautiously suggesting that an approach, which could be less expensive than large sewage treatment plants and could also return valuable fertilizing



Irrigating cropland with sewage.

nutrients to the soil, would be the direct irrigation of raw sewage onto farm or forest land.

Some such disposal systems have been established on a pilot scale in the United States and Canada. The irrigating of treated sewage onto forest land at University Park, Pennsylvania, got considerable publicity about seven years ago. The City of Chicago is now disposing of some of its sewage by "plough-down" methods on the spoil banks of former strip mines. A tannery at Acton, Ontario, irrigated its wastes onto grassland about 10 years ago.

The idea of spreading raw sewage from towns or industries on farm and forest land has been gradually getting more consideration in recent years. The many factors to be considered in such disposal systems

were expounded upon in considerable detail at the "International Conference on Land for Waste Management" held in Ottawa, October 1 — 3, 1973. Dr. Benno Warkentin of the Department of Soil Science was the Overall Conference Coordinator. (See his report, page 3.)

To get some information on the performance of one long-standing system of applying raw sewage to farm land, I visited the Abwasserverband near Braunschweig, Germany, in the summer of 1972 while on sabbatical leave.

The primary work of the Abwasserverband (the Waste Water Control Agency) is to dispose of the raw sewage from Braunschweig (Brunswick) by irrigation onto farm land and woodlots. This project began in 1956; some smaller

scale work had previously been done nearer the City.

The project area is approximately 5000 Hectares (11,000 acres). It is about eight miles long and 2½ miles wide between the Oker and Erse Rivers and north of the Hanover-Berlin Autobahn. The raw sewage comes directly from Braunschweig in a trunk sewer by gravity through the centre of this area. Four pumping stations are spaced along the length of the sewer to pump from gravity filled sewage reservoirs into irrigation system main lines. These main lines are of Asbestos-cement and buried. Lateral lines may run from hydrants on the main lines to distribute the sewage to the sprinklers. The pressure at the pumps is six to seven atmospheres (85 to 105 pounds per square inch).

Dr. Horst Ewart, the project manager, points out that the three main requirements for good success of such sewage disposal are:

1. An area which suffers from some drought;
2. An area with good draining soil, and
3. An area which does not contain many dwellings.

The area used in this case is a deep sandy land which was droughty and of low fertility. Most of the dwellings in the region are grouped in villages along the perimeter of the project land. When the project began there was very little intensive cultivation.

Sewage is now sprinkler irrigated directly onto crops of wheat, barley, sugar beets, potatoes, pasture, hay, as well as some fruit and woodland. Grains and orchards are not irrigated within the last few weeks before harvest. While there was much worry in the early days of disease spreading, they have no known case of a disease locally due to this source since the sewage irrigation began in 1956. There is a noticeable odour within a few hundred feet of a line of sprinklers in the summer months. Dr. Ewart says that the odour is the problem of greatest concern to them.

Sewage systems have been installed in each of the villages in the surrounding region and delivered by pipeline to their trunk sewer. Subsurface drains have had to be installed in only about eight per cent of their project area due to poor drainage of that subarea. The BOD (Biological Oxygen Demand) of outflow from the subdrains is running two to four ppm while that

of the rivers reduces from 50 to 12 ppm through the length of the project area. The incoming raw sewage may have a BOD of 700+ ppm. This indicates the very effective filtration and biological activity of the soil.

They have helped develop a wind-up sprinkler lateral. The best model to date winds up a 1,000 foot long 3.5 inch diameter polyethylene lateral in 25 hours. The part circle sprinkler may have a nozzle up to $\frac{7}{8}$ inch diameter. The sprinkler is mounted on a tubular steel sled. The large wind-up reel is rotated by a dog and cylinder arrangement. The cylinder is powered by the pressurized sewage. While first models worked fine with water, the sewage tended to jam up the cylinder. A bleed off of cylinder water is provided to a small sprinkler to give enough through flow to prevent clogging.

The wound up reel is towed to the next lateral position with a tractor and the lateral is towed out to the end of the line and started up in about half an hour by one man.

The project has a total of 70 Hectares of their own land to contain the sewage pumping stations, main line rights of way and a series of lagoons into which sewage is diverted on Sundays and at times when it cannot all be discharged through sprinklers. These ponds gradually dry up and sludge may be scraped from the bottom and spread on the land.

Conical reservoirs at the pumping stations served also as partial settling tanks and the lowest portion of each reservoir containing a high concentration of sludge is pumped out separately to sludge

drying beds (lagoons) which accumulate enough sludge to need cleaning out about once in three years. The sludge is spread on land and ploughed in.

The land used in this project area was previously rated at the lowest limit of land suitable for cultivation due to its sandy and droughty nature. With the irrigation by sewage it has been yielding very nearly equal to the best land in this part of Germany. In dry years it benefits from the water and nutrients. In the wet years it has less suffering from soil structure deterioration than the clay soils. The organic content of the sewage and the increased biological activity in the soil seems to be helping this land also.

The Abwasserverband also operates a potato dehydrating plant to make acceptable pig feed from small and damaged potatoes from the regional harvest. The work of the Abwasserverband is paid for by 1) \$16 per acre per year from farmers having land irrigated, and 2) 20 cents per 1,000 gallons of sewage from Braunschweig.

The Abwasserverband does all the irrigation work for the farmers. A total of about 50 persons work for the Abwasserverband; 25 of these for eight months, 25 for 12 months. Main line installations and subsurface drains have been installed by contractors supervised by Abwasserverband staff. Road repairs and ditch cleaning are done when there is a lull in the irrigation field work or sludge bed cleaning.

Prof. R. S. Broughton,
Department of Agricultural
Engineering.

QUACKGRASS — A PERENNIAL PROBLEM

Ask any farmer in eastern Canada. He will tell you that one of his most time-consuming, frustrating, futile weed control jobs is cleaning up a field infested with quackgrass. Or couchgrass he might call it, or twitch, or chiendent if he is French-speaking, or *Agropyron repens* if he has been to college. Or worse names than these if he is mad enough.

If he is a corn grower he already knows he has a reasonably satisfactory answer to his problem. He sprays on a double dose of atrazine and grows corn for at least two years. But if he does not grow corn he has a problem almost as formidable as in the days before tractors, heavy cultivators, or herbicides were invented.

Let's first take a close look at this remarkable perennial grass that can beat out just about any crop we can grow. Not only does any plant deserve our respect that flourishes under the pounding we give quackgrass, but also a study of its life style may give us clues to ways we can turn its strength against itself.

Quackgrass is a serious problem in all cool, moist temperate agricultural areas of the world. It has been studied in the British Isles, but in Canada, where it is without doubt the most expensive weed we have, only a few botanists and weed control people have been encouraged to examine it closely. However, there is a fairly clear picture of its growth and the factors that affect its development.

A clean field is infested usually by seed coming as an impurity in crop seeds, but sometimes by

pieces of rhizomes (underground stems) carried on cultivation equipment from field to field. Once established, spread and persistence are associated with the rhizomes. These rhizomes, six to thirty-six inches long, whitish in colour, about as thick as a drinking straw, growing horizontally just under the surface of the ground, with an apex or tip as sharp as a needle, have nodes, scale leaves, and buds every half inch of their length which can give rise to either new shoots or new rhizomes. In one season, a single plant has been known to produce 270 feet of rhizomes. Someone has calculated an acre can contain 80 miles of intertwining matted rhizomes, weighing 5,000 pounds, with two and a half million buds. A formidable problem indeed.

The young quackgrass plant originating from seed starts life very much like any other member of the grass family. First, the spike-like purple-coloured coleoptile emerges through the ground. Then from inside this protective sheath emerge the first, second, and successive leaves, each appearing from inside the previous leaf. The source of this growth, a tiny remarkable glistening white lumpy pyramid crudely known as a growing point, at first remains safely underground, protected by the sheaths of the developing leaves.

Associated with each leaf at its origin on the growing point is a bud. On receiving its "signal" from the "control room" in the growing point, each of these axillary buds in turn will emerge either as a tiller (secondary upright stem) or as a rhizome (horizontal underground

stem). Whether a bud is destined to be a rhizome or a tiller is strongly influenced by the environment of the plant. But more on that later.

In a "normal" plant, the three or four lower buds on the growing point will develop as rhizomes, the next three or four as tillers, and the remaining three or four may not develop at all. Seed is not normally produced in the first year plants, but secondary and tertiary tillers may be produced to produce a leafy clump or "mop-headed" appearance.

Similarly, the primary rhizomes may branch and rebranch in the early part of the season, continuing their horizontal underground growth during spring and summer. In fall after a necessary period of cold, the rhizome tips turn upward ready to form new plants for the second year's growth.

If the rhizome is severed from the parent plant during the growing season, the pattern is changed; the rhizome tip will immediately turn up and form a new shoot. Moreover, if the severed rhizome is fragmented, one or more buds, which up to this point have been protected and hidden by "scale" leaves at the nodes on each section, will be activated into shoot growth, with the priority going to the bud furthest from the parent plant.

In the second year, in the "normal" plant, the rhizome tip, which turned up the previous fall, develops very much like the seedling in the first year. The ratio of tillers to rhizomes is again controlled by the environment of the plant. The growing point in the primary

shoot elongates to produce a seed head, but the secondary and succeeding tillers usually remain "blind." Seed production, therefore, is not great. In following years the pattern again repeats itself with the tips of the horizontal rhizomes turning upward in late fall to form the next year's growth.

Three environmental factors, light, heat, and nitrogen, strongly influence the initiation and development of the rhizomes. Under high temperatures (85°F) almost all buds on the growing point will develop as leafy tillers. Under low temperatures (50°F), the buds become rhizomes.

Under low light (shaded by a crop for example) the buds appear as tillers, but if the plant is in strong light, the buds develop as rhizomes.

High levels of nitrogen in the soil also change the ratio in favour of shoot development, although total rhizome production might still be increased because of better nutrition. Nitrogen also delays the onset of normal summer bud dormancy and also increases the number of buds activated into shoot growth. In each segment should the rhizome be broken up.

Now we can attempt to translate all this into practical weed control.

Traditionally, a farmer has depended on repeated cultivation to keep the field black and the plant without leaves until the food reserves of sugars and starches in the rhizomes are used up. The method is effective, but tedious, time-consuming, and expensive; a rhizome can live 3 months without above-ground parts.

However, the exhaustion process can be speeded up in two ways. First, the greater the number of fragments into which the rhizome is broken early in the campaign, the greater the number of activated buds, and the less food for each. Secondly, the interval between cultivations can be increased to 14 to 21 days, rather than keeping the field black, because in that period the young leaf growth is still drawing heavily on food reserves in the rhizome, and has not yet started to replace borrowed energy. The use of nitrogen fertilizer to activate rhizome buds does not seem to be as economically practical as one might hope. Deep ploughing, though, can add the final blow to fragmented and nearly exhausted rhizomes; few shoots ever reach the surface through six inches of soil from rhizome sections less than six inches in length.

Clearly, the shade provided by a strongly competitive crop is one of the best and cheapest control measures. However, the quackgrass must first be sufficiently exhausted to permit the crop a strong start.

Among the herbicides, atrazine is still top of the list. It is the only one which permits a crop to be grown at the same time as the quackgrass is eradicated. Split applications of two pounds active ingredient in the fall and two pounds again in the spring on emerging quackgrass after seeding corn is more effective than one application of four pounds. Addition of a special mineral oil increases the effectiveness of atrazine on emerged quackgrass. Atrazine works to deplete food reserves; it does not destroy rhizome buds. Atrazine has one

limitation: it may persist for 12 or more months in the soil so the grower is committed to corn in the second year also.

For the non-corn grower, amino triazole and dalapon are each effective, but usually it means losing a crop year. These herbicides are most effective when sprayed on young growth activated by cultivation and followed after a waiting period by ploughing and a smother crop.

Paraquat acts like a chemical blowtorch to destroy above-ground plant parts and thereby the ability of the plant to build up food reserves in the rhizomes. There is some suggestion that paraquat has an additional repressing effect on quackgrass. Unfortunately, paraquat, like amino triazole and dalapon, makes little distinction between quackgrass and crop plants in its action.

Glyphosate, a new herbicide not yet registered at the time of writing, looks very promising in trials at Macdonald College and elsewhere. Sprayed on quackgrass when it has five or more leaves, it will permit planting of most crops within a few days of treatment.

For the farmer, the most practical answer to his quackgrass problem will no doubt be a canny combination of cultivation, chemicals, and crop competition. But for the home gardener, there is little choice to offer but to carry on digging out the rhizomes. Or find a new garden.

Prof. Walker R. Riley,
Agronomy Department.

Macdonald Reports

Staff Changes

Prof. P. Y. Hamilton, Associate Professor in the Department of Animal Science and Director of the Diploma Course in Agriculture, has resigned after serving nine years. Prof. Hamilton has also served as Acting Director of the Extension Department and Acting Director of the Department of Animal Science. Although we regret his departure, we wish him well in his new position as Registrar at the Nova Scotia Agricultural College in Truro.



Prof. P. Y. Hamilton

Dr. Tom Beveridge has been appointed Assistant Professor in the Department of Agricultural Chemistry and the School of Food Science.

Dr. Beveridge was born in Saskatchewan and received his early education in Saskatoon. He attended the University of British Columbia and received his B.S.A. degree in 1968; M. Sc. degree in 1970 and Ph. D. degree in 1973. Prior to his University training Dr. Beveridge worked in the Vancouver General Hospital as a medical technician and also worked with MacMillan Bloedel Ltd. on the microbial deterioration of pulpwood. His graduate work involved studies on the stabilization of the casein micelle in fluid milk and on the physical and chemical properties of egg white.



Mrs. Marion Fleming

Mr. Frank Moran has been appointed Lecturer in the School of Food Science. Mr. Moran received his B.Sc. degree from the University of Manchester in 1958 and his M.Sc. from the University of Wales in 1972.

Dr. Hans Hueckel has been appointed Assistant Professor of the Department of Agricultural Chemistry and the School of Food Science.

Dr. Hueckel was born in Czechoslovakia and received his early education in Germany and Austria. He attended Macdonald College and graduated B.Sc. in Agricultural Chemistry in 1960.

Dr. Hueckel worked for three years with General Foods as a food technologist before proceeding to the degrees of M.Sc. at M.I.T. and Ph. D. at the University of California (Davis). His graduate work was mainly concerned with intestinal absorption of peptides. After graduation Dr. Hueckel worked as a Post-doctoral Fellow in the Montreal General Hospital, on intestinal transplants, and worked for two years in the Montreal Jewish General Hospital on the intestinal absorption of antigens.

Mrs. Marion Fleming has been appointed Sessional Lecturer in the School of Food Science. Mrs. Fleming received her B. Sc. H. E. from the University of Manitoba.

Mrs. M. Elizabeth Murphy has been appointed Lecturer in the School of Food Science. Mrs. Murphy received her Special Teaching Diploma from London in 1966 and her M. Ed. H. Ec. degree from McGill in 1972.

Dr. Rodger D. Titman has been appointed Assistant Professor in the Department of Renewable Resources. Dr. Titman received his B. Sc. degree from McGill in 1965, his M. Sc. from Bishop's in 1969, and his Ph. D. from the University of New Brunswick this year.

Dr. John M. Keoghan has been appointed Sessional Lecturer in the Agronomy Department for the fall term.

After graduating from the University of Canterbury (Lincoln College), New Zealand in 1970, Dr. Keoghan spent three years in the Crop Science Department, University of Guelph, as a Research Scientist specializing in forage crops.

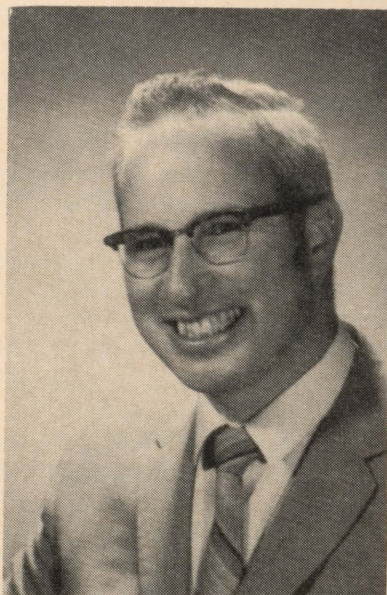
Dr. Howard A. Stepler has been granted sabbatical leave for one year to read and discuss problems of research and education in agriculture at the international level, for which he received a research fellowship award from the International Development Research Centre, the first Canadian thus honoured.

Agricultural Engineering Department

At the Annual General Meeting of the Canadian Society of Agricultural Engineering at Victoria, B.C., August 21, 1973, Dr. John R. Ogilvie, Eng., was given the Canadian Sheet Steel Building Institute Award for Outstanding Work in Teaching, Research, and Extension in the Agricultural Structures Field.

Dr. Ogilvie is currently Chairman of the Agricultural Engineering Department at the Macdonald Campus of McGill University. He has obtained his degrees for studies completed at McGill, Toronto, and Purdue Universities. After eight years of Agricultural Engineering extension work in Ontario, he returned to McGill to teach and lead research in the Agricultural Structures field in 1963. He was appointed Chairman of the Department in 1971.

Dr. Broughton is an Associate Professor of Agricultural Engineering at the Macdonald Campus of McGill University. He has served the C.S.A.E. previously as Soil and Water Engineering Subject Matter Coordinator and as Vice-President Technical. He is a member of several Engineering and Scientific Societies. He serves on the C.C.P.E. Accreditation Board Subcommittee for the Agricultural Engineering Syllabus of Examinations.



Prof. R. S. Broughton

At the Annual General Meeting of the Canadian Society of Agricultural Engineering at Victoria, B.C., August 21, 1973, it was announced that Dr. Robert S. Broughton, Eng., has been elected President-Elect of the C.S.A.E. for the ensuing year.

The Family

Farm

Published in the interests
of the farmers of the province
by the Quebec Department of
Agriculture

THE QUEBEC DEPARTMENT OF AGRICULTURE AND MINK BREEDERS

Before giving you a brief account of relations between the Quebec Department of Agriculture and the mink breeders of our province, I want to wish all of you, most heartily, a very cordial welcome — especially the delegates from the associations of every province in Canada, officials of the federal and provincial governments, representatives of Universities and the fur trade and, last but not least, all our guests.

I should also like to offer my congratulations to your president and vice-president and the directors of your executive committee for the excellent work done voluntarily throughout the year for the benefit of all the members, both at the administrative level and in connection with the excellent promotional and advertising efforts and other activities of your association. I know for a certainty that this organization founded 21 years ago has justified its existence, above all as regards the marketing of mink pelts. Indeed, if your association did not exist, it would be necessary to create it with the utmost possible haste.

Historical Note

It is not my intention to give an historical account of the growth of the rearing of fur-bearing animals in Quebec or to discuss the causes which, in recent years, have led to the changes we have seen both in

the application of technical fur-farming methods and in market requirements.

However, I feel I must emphasize that mink were already being raised in 1915 and that, in the following years, Ontario and the United States bought their first breeding stock. Quebec is thus rightly considered to be the cradle of mink breeding.

Quebec is also proud to have climbed to second place — in Canada surpassed only by Ontario — in the production of mink pelts.

Industrial Mink ranches

Quebec has a nucleus of competent and progressive mink breeders and it would be a good thing if there were more of them because there is a place here for such soilless productions.

Another special feature of Quebec's mink industry is the number of breeding females — averaging over 700 per ranch — convincing evidence of the increasing industrialization which is becoming a necessity in this day and age.

Master plan

In the context of Quebec's agriculture, an output of 120,000 mink pelts a year worth more than two million dollars is of very considerable economic importance, particularly as this special field of production fits in with Quebec's comprehensive **plan for the development of the agricultural sector** whose main aims are the diversification of farm productions and self-

supply as regards the raw materials needed for these productions.

Economic Importance

We also consider that the rearing of mink has considerable additional economic importance for Quebec, since over 80 per cent of the food consumed by mink consists of by-products from meat and poultry abattoirs and fish plants. Annual consumption of this feed exceeds 10 million pounds valued at \$700,000, representing a source of further income for farmers and fishermen. To this must be added the almost half million dollars paid in wages to farm help working on mink ranches. As regards the amount of capital now invested in mink ranches in Quebec, it is now about \$4,000,000.

Mink fur, besides being partly an export product bringing in foreign currency, which is highly appreciated during the present monetary conjuncture in North America, also has a favourable economic impact through the marketing and dressing of the skins and the making of fur garments. All these activities create thousands of jobs which, in turn, mean millions of dollars. Furthermore, the interest which our governments take in mink breeding is justified in view of the federal and provincial taxes levied on the product.

The Fur-bearing Animals Section

All this explains why the Quebec Department of Agriculture recognizes the importance of the part played by mink breeding, not only in the economy of Quebec but in that of Canada as a whole. In fact, as long ago as 1942, the Quebec

Department of Agriculture created a Fur-bearing Animals branch and was thus certainly the first provincial agricultural ministry in Canada to acknowledge fur farming as a part of agriculture.

By this means, the Quebec Department of Agriculture provides mink breeders with the services of a staff of agriculturalists and agricultural technicians attached to the Fur-bearing Animals section of its Animal Productions division. In addition, a veterinarian of the Department's Veterinary Services branch is a specialist in the field of fur-bearing animals and is at the disposal of Quebec breeders.

The primary aim of the Fur-bearing Animals section is constant improvement in the raising of fur animals and their products through the application of the most efficient technical methods of breeding and rearing. The responsibilities of the Section's personnel also include herd management and selection, ranch management, and the grading of furs for the market. The Section's staff also organizes exhibitions, field-days and demonstrations, to which the Department makes a financial contribution.

Besides all this, the Section's personnel collaborate regularly in research, particularly on mink, carried out by the Faculty of Agriculture and Food of Laval University or by other bodies.

Preventive Vaccination

Since 1965, the Quebec Department of Agriculture has made available to Quebec mink breeders, for a small fee, a program of preventive vaccination against "distemper",

infectious enteritis, and botulism. This program has proved very effective. During 1972-73, almost all Quebec mink breeders took advantage of it and 127,656 mink were vaccinated. The vaccines are administered by veterinary practitioners of Quebec whose fees are paid by the Department of Agriculture.

Bank loan guarantee

The Department's aid is not limited to the improvement of production and the control of disease. It also extends to long and short-term financing. Thus, since 1970, the Department has consented to guarantee a short-term bank loan on behalf of the Quebec Fur-breeders Cooperative Association for the benefit of individual breeders.

Farm credit

Besides this, Quebec mink breeders are eligible, on the same grounds as farmers, to benefits under various farm credit and farm improvement acts.

Act to promote credit to farm producers

Also, quite recently — starting March, 1973 — the Quebec Department of Agriculture has implemented an "Act to promote credit to farm producers". As a result, under certain conditions, breeders of fur-bearing animals may benefit by short-term loans guaranteed by the government.

These then, briefly, are the services the Quebec Department of Agriculture provides for our mink breeders.

In conclusion, I hope that your discussions will be most productive and, on behalf of the Department, I heartily wish all of you and the Canada Mink Breeders Association the greatest possible success in the coming years.

(Text of a speech by Dr. Camille Julien, assistant deputy-minister of Agriculture, at a banquet given by the Quebec Department of Agriculture during a meeting of the Canada Mink Breeders Association at Lac Beauport, 11-13 September, 1973.)

Some Practical Advice about the Winter Stabling Period

For raisers of livestock the coming of fall heralds the long period of winter stabling which, in the case of most domestic animals, means the start of a time of stress commonly caused by the many changes in feeding, environment, daily routine, etc.

The dairy cow is particularly affected by these changes because she has to go on producing milk as regularly as possible. Experience has shown that stress can lead to a sudden drop in a cow's milk production. The dairy farmer's income may suffer seriously as a result, because it is generally impossible to bring her production back to the original level after a sudden and abnormal decline.

Buildings

When the animals are brought back into the buildings, they should be housed as comfortably as possible

in order to minimize stress. To do this, controlled atmosphere buildings are necessary with well-insulated walls and thermostatically controlled power ventilation to ensure that air laden with moisture and various gases is replaced by fresh air.

There is a certain temperature which is ideal as regards the comfort of farm animals. In the case of dairy cows it is 55 degrees Fahrenheit. During very cold weather and especially when the presence of condensed moisture is noticed on inside walls, it is better to lower the indoor temperature a few degrees for the sake of the animals' health because, as a rule, excess humidity is more harmful than beneficial to them. By doing this, many cases of persistent coughs in young stock can be avoided.

Clipping

All animals brought into a warm barn in the fall should be clipped all over as soon as possible. At least one more partial clipping, of the hindquarters and udder, should be done in spring (around March) when it is starting to warm up outside. Every two or three weeks it is advisable to give the tuft of each cow's tail a good washing in soapy water and a rinse in cold water.

Grooming

Cows kept in the barn should be brushed and curry-combed every day. It should be borne in mind that animals also respire through the skin and that the cleaner a cow is, the more effective this process will be. Besides making the animal

more resistant to disease, more docile and less nervous, such grooming can stimulate her appetite and, especially in the case of heavy milkers, result in increased yield — in many cases by as much as 500 pounds in a single lactation.

Exercise

During the long winter stabling period, it is not a bad plan to let the animals out into the yard from time to time to make them take a little exercise and also to see if any of them are showing signs of heat. Another good plan is to put the animals by turns into a pen or box stall, particularly the older cows or those whose legs are inclined to tire. For cows about to calve, a disinfected box stall or pen with plenty of litter should be available.

By not milking the cow dry during the first days after she has freshened, the herdsman can allow her to keep her calcium level a little higher and thus help to avoid many cases of milk fever. The administration of large doses of vitamin D during at least the week before the calving date is recommended as a preventive measure.

Feed Rations

If the diet of dairy cows is to be altered, it is important to avoid any sudden change in the quantity or composition of the feed. It is also advisable to make a bowl of mineral substances available to the animals, provide them with plenty of water of adequate quality and, especially, to include in their ration the necessary ingredients to supply

energy, protein, phosphorus, and vitamins A and D. In the case of dairy cattle which are going to be kept in confinement for a long time, it is a good thing to give them a special "A. D. E." vitamin supplement when they are brought inside in the fall and again in January or February.

The Best Time to Cull

The start of the winter stabling season is more than ever the time to cull the herd to make sure that every stall will contain a cow that is worth keeping. A number of profitability factors have to be taken into account in carrying out the kind of judicious selection that will lead to a herd with a steadily increasing yield.

The strictest selection should be made in the case of cows in their first or second lactation because, although cows with only a fairish yield at the first lactation will probably do better in later lactations, their production records generally turn out to be lower than those of the better cows by about half the difference between the herd average and their yield during their first lactation. Old cows can also be eliminated at this time if their production consistently falls below the herd average or if they are infirm.

Regularity

Regularity (including milking time, feeding order, and routine in other matters) is always a very important factor in herd management because cows get used to the care and

attention they get and, after that, any change of procedure causes a decrease in milk production.

Clément Plante, Agronome,
Dairy Cattle Division.

Aid to Improve the Health of Sheep

Eligibility

1. Purebred sheep raisers participating in the performance testing of sheep on the farm;
2. Regular members of regional sheep breeders associations who satisfy the requirements as regards the number of sheep kept;
3. The program started on April 1 with the breeders named on the lists submitted by secretaries of regional associations: other breeders may get themselves admitted on March 1 of the following year.

Breeder's undertakings

1. Submit an application to the director of the Veterinary Service;
2. Satisfy minimum requirements concerning buildings, equipment, and flock management; fulfilment of these requirements to be judged by the Veterinary Service;
3. Keep a complete record of births, deaths and sales of all sheep born on his farm;
4. Mark all the lambs born on his farm, at birth;

5. Allow the authorized veterinarian to make all necessary inspections and give him all the information required;

6. Strictly carry out the veterinarian's instructions concerning a health program for sheep flocks.

Benefits

The Department of Agriculture provides the following aid to help breeders meet the requirements of this provincial program;

Technical aid: Permanent personnel of the Department will be instructed to visit the flocks of eligible breeders three times a year. Copies of reports, drawn up on form SVM-2, will be distributed as follows:

The original will be sent to the Veterinary Service, 200 Chemin Ste-Foy, Québec 6; the first copy will be left with the farmer; the second copy will be kept by the veterinarian making the report; the third copy will be sent to the veterinarian, assistant veterinarian, or regional coordinator; the fourth copy will be sent to the Livestock Improvement Division, 200 Chemin Ste-Foy, Québec 6.

Compensation for slaughter of diseased animals: A slaughter grant of \$15 per mature animal will be paid if, in the opinion of the veterinary director, the disease is contagious or hereditary and cannot be controlled otherwise.

Holidays on Farms

Do you enjoy meeting people and having them in your home? Do you have a well set up farm in an interesting locality? If so, have you considered taking in vacationing guests?

The idea is not new. In France there are approximately 14,500 rural lodgings which are mostly on farms. Closer to home, over 50 Ontario farms are organized to receive vacationers and Manitoba, Prince Edward Island and Saskatchewan have had a great deal of success with their farm vacation plans.

The reasons for the growing interest in farm vacations on the part of city people are varied: higher incomes and increase leisure, growing urbanization and a general back to the land movement and interest in rural life are among them.

People from the city are not only attracted by rural life but they are willing to pay for a farm vacation. And if they are interested, and if you agree, they will probably offer to help with some of the chores. In return they will appreciate fishing or swimming in a nearby river, walks in the woodlot, excursions to the surrounding area, square dancing, etc.

Your farm could interest vacationers in all seasons. The summer season, of course, is the most popular, but the other seasons also offer attractions to urban people. If you permit hunting in your woodlot, this can be an attraction in the fall, as are walks in the colourful woods. Skiing, snow shoeing, and snowmobiling are popular winter sports

that you might provide for winter guests. And who can resist a sleigh ride? Collecting sap and the activities around the sugar house are popular spring time attractions.

If you have a large house with some unoccupied rooms, a cottage on the property or a good location for a camping area, then consider the idea of taking in paying guests. It is an ideal source of extra income.

If your farm meets the basic requirements for welcoming holiday-ers and you are interested, contact immediately, before **November 15**, the local or regional office of the Quebec Department of Agriculture so that your farm can be included in a list of farms which are prepared to receive vacationers in 1974.

Reimbursement of Municipal and School Taxes

A) The Real Estate Assessment Act authorizes the Department of Agriculture to repay to the owner or occupant of a farm who is recognized as an agricultural producer within the meaning of the Farm Producers Act, a sum representing 40 per cent of the municipal real estate taxes paid for 1973 and 40 per cent of the school taxes paid for 1972-73 on immovable property intended for the operation of a farm.

Such an agricultural producer is defined as follows:

"producer": a person engaged in the production of a farm product

except: 1) a person engaged in such production as an employee within the meaning of the Labour Code; 2) a person who exploits the forest except when he exploits a wooded portion of his farm; 3) an individual engaged in the production of a farm product consumed entirely by himself and the members of his family; 4) a person whose farm production intended for marketing has an annual value of less than \$1,000.

In order to receive this repayment, you must obtain a declaration (on pages two and three of the application form), to the effect that your real estate taxes have been paid in full, from the secretary or secretaries of the municipality or municipalities or the secretary or secretaries of the school commission or commissions concerned.

After having signed your claim (on page four) simply return it in the return envelope, and your request will be given all due consideration.

B) The Real Estate Assessment Act authorizes the Department of Agriculture to repay to the owner or occupant of a farm who is not an agricultural producer within the meaning of the Farm Producers Act, 35 per cent of the amount of the school taxes levied on his immovable property.

The word farm is defined as an immovable operated: a) for agricultural or horticultural purposes, outdoors or under glass; b) for poultry keeping or beekeeping purposes or for raising domestic or other animals; c) as an orchard or maple sugar bush.

If you believe yourself to be entitled to this repayment, you must give your reasons in the space reserved for them in the application form under the heading **ELIGIBILITY**. You must also obtain confirmation that the taxes with which you were charged have been paid in full, from the secretary or secretaries of the school commission or commissions concerned.

After having signed your claim, simply return it to the following address: Grants and Subsidies Division, Department of Agriculture, 200 Chemin Ste-Foy, Quebec City, G1A 1E8 and your request will be given all due consideration.

Mrs. V. R. Beattie

Mrs. Victor Raymond Beattie, nee Hazel Evelyn Stevenson, died suddenly on Friday, October 5, 1973. The funeral was held on Monday, October 8 in Richmond, Quebec.. Mrs Beattie was born at Learned Plain in Compton County on July 6, 1897. At the time of her death Mrs. Beattie was Past President of the Quebec Women's Institutes and a member of Spooner Pond branch in Richmond County.



Membership in the Quebec Women's Institutes in 1947 and a Life Membership in the Federated Women's Institutes of Canada in 1973.

Mrs. Beattie's husband predeceased her on March 25, 1973. To her son Arnold and his family all members of the Quebec Women's Institutes offer their deepest sympathy.

Institute? 2) Are we doing all we can to encourage younger women to join our organization? 3) How can we make our meetings more interesting? 4) What can we do to put more meaning into the lives of our senior citizens? Many good things came out of these discussions which were reported back to the Provincial President by each secretary.

The meeting adjourned for lunch which was served buffet style in the school cafeteria. The lunch, hosted by the Missisquoi County members consisted of cold turkey and ham, salads of many varieties, homemade pickles and rolls and an angel food dessert.

The meeting resumed with Mrs. Irene Williams of the Fordyce branch and Missisquoi County President, doing a monologue called "The Contestants". She imitated four television program personalities and, during her costume changes, everyone enjoyed a singsong. This added a great deal of enjoyment to the day's events.

Mrs. Westover then gave a few remarks after which she called upon Mrs. Cascadden, Provincial treasurer, to "tell the duties of the treasurer." She however stated that she felt most everyone knew these duties and, instead, wanted to give a resume of where the W. I. money was spent and what it was spent for, basing it on the value of a dollar. In explaining this she had a very large circle drawn on a piece of cardboard and broken

Membership Conference

The Membership Conference of the Quebec Women's Institutes for the Brome, Missisquoi, Rouville, and Shefford Counties was held in the Heroes' Memorial Elementary School in Cowansville on Saturday, September 15.

In spite of inclement weather, the registration, which took place at 10 a.m., showed an attendance of 71 members.

Mrs. Louise Fulford of the Cowansville branch and Missisquoi County

Treasurer was at the door with the guest book and handed out name plates with pins of assorted colours which identified the members to their "groups".

The Provincial President, Mrs. J.W. Westover, opened the meeting with a few remarks and the Club Women's Creed was repeated in unison. There were many interesting topics discussed and considered in the study groups, which were made up of eight or nine with an appointed chairman and secretary in each. The topics were: 1) What is the future of the Quebec Women's

up in "wedges of pie". One of the interesting things she mentioned was that it cost 23½ cents per member to attend the annual Quebec Women's Institute Convention held each summer at Macdonald College. Mrs. Cascadden is to be complimented on the work and great deal of time and effort spent in preparing her facts and figures.

A question period followed, after which Mrs. Williams thanked Mrs. Westover and Mrs. Cascadden for the success of their program planning. The singing of the "Hymn of All Nations" brought a most enjoyable day to a close.

Notes from Bonaventure

Marcil branch held a School Fair in conjunction with the Bonaventure County Exhibition. Fifty gardens were judged. Mr. Urban Laudry, who represents Laval ice cream of Quebec, gave individual dishes of ice cream sundaes to the children who exhibited.

Restigouche came up with an interesting motto for publicity for the W. I. "Keep your fears to yourself but share your courage with others." This branch entertained the County Convention earlier in the year. They have filled handi bags and sent them off and sent a gift to a patient in hospital. Activities include: a quilt in process, quiz words on French, and an auction sale to raise funds.

Port Daniel had a tour for their August meeting. They drove to Paspebiac East and had lunch at a restaurant and then had their meeting in space which was provided

for them. They visited CHNC Radio Station and the New Carlisle Paspebiac Telephone building. Their final visit was to CREA where they admired the beautiful handicrafts.

Guest Speaker from England

At the August meeting of the **Kinnear's Mills W. I.** (Megantic Co.) the guest speaker was Mrs. Janet Law, sister of one of the members and a member of the Women's Institute in England. She spoke about the branch to which she belongs, which is in a small village called Crockenhill, in Kent County, which is in the southeast of England. The members number over 60 and they participate in many activities including giving a party for the elderly in the village, some 100 people. Mrs. Law, who is on the committee in charge of catering, described the three-course luncheon and entertainment provided by the Institute. She pointed out that although there is a considerable amount of work involved in such an undertaking, their members feel that it is very worthwhile and derive a great amount of pleasure from seeing the senior citizens enjoying themselves so much.

The Institute also tries to help with community projects. They have placed a sign on the village green and will be donating seats and planting trees for the benefit of all the villagers. Of special interest to the elderly and infirm is the "Meals on Wheels", which is the delivery of hot lunches for a very nominal sum. A library is also operated on the same principle. and members have a rota so that all participate.

The Annual Produce Show organized by the Institute gives all the villagers, including the children, a chance to display schoolwork, various handiwork, and garden produce. The farmers display fruit, which is the main source of income in this area, as well as any other crops they may have grown.

Although there are no official meetings in the summer, members gather at the home of Mrs. Latter to hold a garden meeting in September. The house is very old, surrounded by a moat and spacious and beautiful grounds. Mrs. Latter, who is an ex-president of this W. I., is a very active member and has attended W. I. meetings all over the world. Through her they now correspond with an Institute in Australia.

In the fall a Harvest Supper is given, and the anniversary of the Institute is well celebrated with a party. Refreshments include a large cake with the number of years on it and wine. Members donate gifts every month for the drawbox and Pennies for Friendship are put into a large box left at the back of the hall for all who wish to give. Donations are given during the year to UNICEF, the blind, orphans, the mentally disabled and so on. Members of the Kinnear's Mills Institute questioned Mrs. Law on different activities which she had mentioned such as trips taken by the branch and various other items of interest. She thanked everyone for their kind invitation to the meeting and said how much she had enjoyed herself.

Mrs. Audrey Allan, President, then thanked Mrs. Law and presented

her with a plate from the Candlish United Church on behalf of the branch with best wishes from all the members.

Varied and Worthwhile Activities

Stanbridge East members (Missisquoi Co.) work quietly on their projects but the results of their good works are felt in many lives. Not only does this branch procure seeds for children for the local school fair and give \$25 towards prizes but members attend this successful event. Fifty yards of flannelette were made up into diapers for a hospital for the retarded at Bedford. A Forgotten Patient at the Douglas has been adopted and the members brought in Christmas gifts for an Indian Mission in the Yukon (two boxes were needed to hold them). Other activities included 16 handi bags being sent out, a UNICEF Shell-Out sponsored, Christmas cards ordered and handicrafts sent to the FWIC Convention at Banff. Two members attended a meeting called to organize a regional health centre.

Interesting programs included movies and commentary by Canon Willis on his life in the Peace River District over 30 years ago, and a talk on Iran by Mrs. Carr of Sutton. Mrs. Carr told about the topography of Iran, the people, plants, flowers, economic life, Crown jewels and showed items such as silk scarves, hand-painted enamel and silverware, jewellery, hooked work and embroidery. She also showed pictures of the countryside and beauty spots.

Most members have their 25-year pins which represent a lot of years of service to the community.

Sour Cream Coffeecake

- 1) Beat together:
 $\frac{1}{4}$ cup butter or margarine
1 cup sugar
1 teaspoon vanilla
2 eggs
- 2) Sift together:
1 teaspoon soda
 $1\frac{1}{2}$ teaspoons baking powder
 $1\frac{1}{2}$ cups flour
- 3) Mix together:
 $\frac{1}{2}$ cup brown sugar
1 teaspoon cinnamon
 $\frac{3}{4}$ cup chopped nuts

Add alternately to first mixture 1 cup of commercial dairy sour cream and the second mixture.

Grease well a 9-inch tube pan.

Put $\frac{1}{3}$ of the third mixture on bottom of pan. Next put half of batter in pan followed by more of the third (or sugar mixture). Add rest of batter and top with remaining sugar mixture.

Bake 45 minutes in a 350-degree oven.

The recipe was sent in by a **Megantic Co. W.I.** member.

Modes of Transportation

The **Compton County Women's Institutes** had a very interesting display of different modes of transportation at this year's Cookshire Fair. The early scene depicted rough, dirt roads, trodden down by the traffic — people walking or on horseback, oxcarts, and horse-drawn vehicles.

As roads improved cars, both ancient and modern, trucks, motor bikes, and bicycles were seen. Along the highway were houses, a store, and a church. Nearby could be seen a lake surrounded by trees and a log cabin. On the lake was a lifelike Indian in his canoe.

A winter scene revealed sleds and snowmobiles on a snowy hill. Another scene showed three railway trains of three different eras. This seemed to be the favourite with the younger generation — many of whom stopped by to admire the trains and "beg" their parents to buy one of them.

From the ceiling hung models of various types of planes and helicopters. The walls were covered with various Canadian scenes, maps, traffic signs for both the motorist and snowmobile enthusiast, skis, mocassins, a toboggan, snowshoes, sailing ships, and a dory. A garage and cars could be seen nearby.

Perhaps the most praised item was a large handmade horse and two-wheeled cart carved from wood and painted to look very real indeed.

A Successful Year

Cowansville branch (Missisquoi Co.) has had a very successful year so far. The meetings are held regularly on the first Tuesday of the month with excellent attendance and much interest shown in the various programs presented by the conveners. Besides our usual obligations to the Q.W.I. — the Service Fund and Pennies for Friendship — we gave money to

Canadian Save the Children Fund, two miniature paintings were sent to Macdonald College as gifts for the F.W.I.C. Convention, and useable materials were donated to the Dunham School for their work in handicrafts. At our June meeting a sale of plants and useful articles took place and at our July meeting a penny fair was held with satisfying results. Also at the July meeting there was a display of paintings done by Mrs. Craig and fancy articles by Mrs. Jenne. For our August meeting members of Cowansville and Stanbridge East branches held a joint picnic on the grounds of the Missisquoi County

Museum at Stanbridge East. On our arrival at the Museum we were welcomed by the Curator, Mrs. Ruby Moore, and Mrs. Tait, President of the Stanbridge East branch. A tour of the Museum followed and much interest was shown in the various articles on display. The group then gathered on the lawn and, prior to lunch, Mrs. Tait asked that we observe a moment of silence in memory of the late Louis St. Laurent, Prime Minister of Canada from 1948 to 1958. Following lunch, the group walked a short distance to the Hodge Store, which is part of the Museum, and which typifies the country store

about which someone declared in the long ago, "Ask what you will and the chances are we have it" The tour of the store brought to a close a very pleasant day which will be long remembered by the members of the Women's Institutes of Cowansville and Stanbridge East.

Dear W. I. Members:

For some time I have had a "dream" trip — to drive to all the areas in Quebec where there are W. I. branches. Last week part of that dream came true as Evelyn McKiddie and I toured the Eastern Townships for a couple of days, enjoying the scenery and saying "Hello" to a few of you. Our first stop was at Abbotsford at the foot of beautiful Yamaska mountain where the apple trees were laden with their colourful fruit and where apple picking was in progress. Mrs. Thomson kindly showed us their orchards and told us something about apple farming. At Richmond we were pleased to see Mrs. Beattie looking so well and little realized that this would be the last pleasant chat we would have with her. Due to a change of plans we were sorry to miss seeing Mrs. Westover but had a pleasant chat with her on the phone at the Sutton W. I. meeting where she was the speaker. One evening we heard about some approaching school fairs as we chatted with Mrs. Gordon French and her family in their friendly home at Sawyerville.

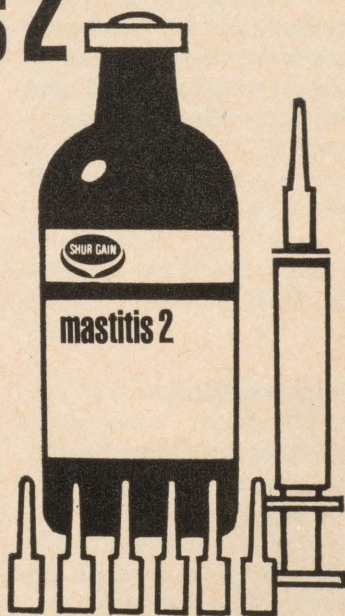
Speaking of school fairs... your reports show that many of you have been assisting both school fairs and 4-H Club Achievement days in various ways. I attended the La-chute 4-H Achievement day and

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admired the splendid exhibits, by the young people, of cooking, sewing, weed, leaf and legume collections, grain, vegetables and flowers, as well as their calves and horses.

Delegates from all the local organizations of Sawyerville, led by the Women's Institute, met with the Council in May regarding litter on the streets and sidewalks and were courteously received by the Mayor and councillors, who passed a motion to place garbage baskets throughout the town in hopes that the public would respect such an effort and make use of these containers and so enhance the beauty of the town.

Wakeham sent a letter to the Town Council during the summer months regarding the beach at Haldimand.

They requested that garbage receptacles be placed there and that it be generally cleaned up and that rest rooms and changing rooms be put up for bathers. Although no reply was received, it seems to have had the desired effect as a great difference in conditions is apparent.

Sawyerville W. I. regretted the loss of a valued member, Mrs. Irene Perkins, but extended their best wishes (and a lovely gift) as she left to join CUSO on a teaching term in Jamaica for the next two years.

Shipton will have 15 minutes set aside each month for speaking French and **Black Cape** had French expressions to be translated into English.

Black Cape had a discussion on the ever rising cost of living and how to buy meat and use leftovers. **West**

Island heard the Director of Consumer Affairs for IGA stores speak on "Shop Wiser — Shop Harder". The speaker gave many tips on how to stretch the food dollar. Unit pricing was explained in detail and members heard the encouraging news that manufacturers are starting to open-date their products instead of the puzzling codes now used. The practice will soon be mandatory.

Mrs. Wallace Younie, member of **Howick** for 60 years was presented with a pin from the branch.

Pioneer plans to send parcels of new, and nearly new, toys and clothing for children and adults in Nain, Labrador, where many than the more than 400 children don't get a toy or a gift for Christmas. **Rawdon** received a letter of thanks from Nain along with a plea for more help for the rest of the

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children there. This branch hopes to do more this year. A letter of thanks and pictures of the Eskitots in Grise Friord with Rawdon's 1972 gifts were also received by the branch.

Brownsburg witnessed milking done by pipeline method at the home of the Agriculture Convener, one of the few farmer's wives in the branch.

Bury gave \$10 towards a telescope for a young astronomer to study the stars. Though handicapped in walking, he is keenly interested in everything.

The husbands did the dishes and tidied up after they had enjoyed a potluck supper with their wives at **Melbourne Ridge**.

Scotstown gave the radio broadcast in August; the topic was their beautiful new community centre.

One of **Frontier's** members, a teacher in the Laurentian Elementary School, explained the reasons and benefits of the week spent with scholars at the Arundel Science Farm. This wasn't a holiday for the children — they learned more than if they had remained in their classrooms. She also explained the usefulness of the new Learning Centre at the school and mentioned that any time W. I. members wish to give money to help education there were any number of items which are needed in this new venture.

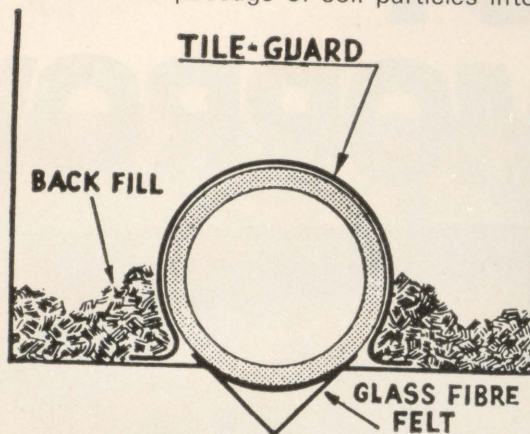
At the Stanstead County Agricultural Fair, Ayers Cliff, the County W. I. members held "Open House" and advertized Institute through the operation of a tea room where people could come, rest and chat with friends over a cup of tea and light refreshments for 35 cents. It was probably the most popular room on the fair grounds. **Beebe** W. I. placed third and **Hatley Centre** fourth in the five branch competition with Circles de Fermiere branches to exhibit collections of eight hand craft articles.

In closing... it's a funny thing about an idea — it never works unless you do.

Mrs. Perley Clark,
Q.W.I. Publicity Convener.

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average annual interest to maturity

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